

# TECHNOLOGY BRIEF: CLOUD INFRASTRUCTURE

VMware NSX® SD-WAN by VeloCloud™ Services  
Reliability, Resiliency, and Security

NSX SD-WAN Service Gateways and Orchestrators enable optimized data paths for all applications, branches, and data centers along with the ability to deliver network services from the cloud. Eliminate datacenter backhaul penalties with a cloud-ready network to provide an efficient direct path to public and private enterprise clouds. Enterprises get unmatched flexibility to decide what services to deploy and manage, when to upgrade and adhere to network operation policies.

## Availability and Uptime

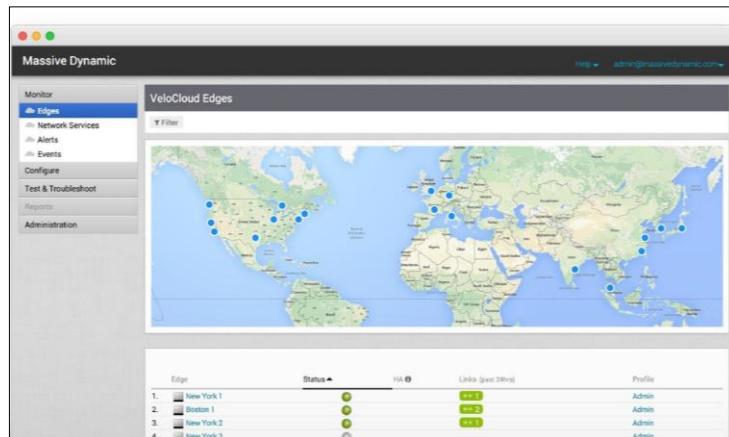
- 99.99% uptime service level agreement, 24x7 automated failure detection
- Global infrastructure of datacenters for optimal selection and redundancy
- VMware NSX® SD-WAN Orchestrator by VeloCloud™ is not in the data path, nor required for ongoing flow control
- Management continuity is provided with failover NSX SD-WAN Orchestrators and regular backups
- Active-active VMware NSX® SD-WAN Gateway by VeloCloud™ provide sub-second resiliency for VPN traffic
- Additionally, SaaS traffic can also failover to bypass gateways
- Scheduled maintenance windows are advertised 72 hours in advance, and VMware NSX® SD-WAN Edge by VeloCloud™ upgrade windows are deferrable with times requested by account holder
- Cloud connectivity does not impact customer network operations

## Cloud Datacenters

- Co-located in Tier IV SSAE 16 Type II certified datacenters
- ISAE-3402 (SAS70 / SSAE16 Replacement) certified facilities & providers for reliable and failover design to ensure uninterrupted service in the event of a catastrophe
- Each data center serviced by multiple providers and multiple locations
- Meets the requirements of International privacy controls and compliant with European safe harbor type policies

“NSX SD-WAN incorporates a distributed network of service gateways and NSX SD-WAN Orchestrators deployed at top tier cloud datacenters around the world, providing scalability, redundancy, and on-demand flexibility.”

— DANIEL SIMMS  
HEAD OF IT OPERATIONS  
ADDLESHAW GODDARD



### Redundancy and Disaster Recovery

- Customer network data (system and configuration data) replicated across multiple datacenters with regular backups
- Well-documented, rapid response operation teams across multiple locations
- All datacenters serviced by multiple top-tier carriers
- Rapid failover to backup system in the event of hardware failure or external factor

### Robust Physical Infrastructure

- Controlled physical access with onsite 24x7 security, CCTV coverage and biometric access controls with mantraps
- N+1 UPS with a minimum of 5 minutes of reserve power at full datacenter load. N+1 redundant generators with onsite fuel for a minimum of 36 hours
- Blended Transit with a minimum of 10Gbps capacity and facilities are selected to be near or at IX locations with dense participation
- Precision cooling system providing temperature, airflow, and humidity controls
- Early fire detection with isolated and fast suppression response

### Network Infrastructure and Security

- Secure account separation for multi-tenant NSX SD-WAN Orchestrator and Gateways
- Strong firewall policies to deny access for malicious traffic from public networks
- Proactive monitoring, regular vulnerability scans and penetration tests performed by reputable service provider, and automated notifications
- Management network communications protected by industry-standard encryption algorithms and security protocols
- Multi-factor authentication for administrative remote access
- Configuration change monitoring and access audits for production network

## Account Protection and Privacy

- Accounts are password protected and accessed via SSL
- Granular user, role-based access controls and policy framework helps to manage 3rd party access
- Monitoring and incident response procedures in all locations with 24x7 standby teams
- No data traffic is captured nor stored unless enabled by customer with packet capture feature
- User and host machine information is only available to administrators selected by account holder

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<sup>1</sup> Footnote First Line U.S. and Worldwide Server Installed Base 2007–2011 Forecast, Doc #207044, May 2007;

<sup>2</sup> Footnote Secondary Line Multicore Innovations Disrupt The Worldwide Server Market, Doc #206035, March 2007;

<sup>3</sup> Source: VMware

